

Prolactinoma / Hyperprolactinaemia

A high level of the pituitary hormone **prolactin** (known as 'Hyperprolactinaemia') is the commonest type of overactivity of the pituitary gland. This is often due to a benign pituitary tumour known as a **Prolactinoma**. A normal prolactin level in the blood is up to 400 (mU/l), and in patients with prolactinomas the level can be in the 1000's, 10,000's or 100,000's. With milder elevations the pituitary MRI scan may actually be normal.

Too much prolactin in the blood may cause the following problems:

- * Irregular or absent periods in women
- * Milky discharge from the breasts (Galactorrhoea) and breast tenderness
- * Difficulty becoming pregnant (which is usually reversed by treatment)
- * Loss of libido in both men and women, and often impotence in men.

Prolactinomas are usually best treated medically with a 'dopamine-agonist' drug called **Cabergoline** or similar drugs like **Bromocriptine** or **Quinagolide**. Surgery and radiotherapy are less successful and are only rarely needed when medical treatment is not successful, or cannot be tolerated.

Bromocriptine & Cabergoline

These drugs act in the same way as the natural substance dopamine produced by the brain to switch off the production of prolactin. We therefore expect these drugs to return your level of prolactin to normal. This should result in a number of good effects: In women periods usually return to normal and breast tenderness and milky discharge should decrease. In both men and women suppression of the libido (or sex-drive) may be reversed. In men any problems with erections may also be improved. If you have a large prolactinoma this should also get smaller on treatment.

Bromocriptine has been in use for over 30 years, some patients have been on treatment for all that time, with no long-term side effects – including before and during pregnancy. However, if anyone begins to take the full dose immediately on an empty stomach then they are likely to suffer from reversible side effects the most common of which are nausea and vomiting, dizziness on standing, 'flu-like' feelings and nasal stuffiness – these can usually be avoided (see box).

Cabergoline is a newer drug (licensed for over 15 years) which only needs to be taken once or twice a week and which very rarely causes side effects on starting treatment. This drug is therefore very convenient and we now use it first line. There is no evidence of harm in women who become pregnant on this drug – but since there is still only limited information the manufacturer recommends stopping this tablet before attempting to become pregnant (However please discuss the issue with us in the clinic first – don't just stop the tablets yourself!)

Unless very mild, the high prolactin level often returns when bromocriptine or cabergoline are stopped, and long-term treatment is often necessary. We will always try to find the lowest dose of the tablet which controls your prolactin level. If your prolactin has been well controlled for several years on a low dose of tablets then we may advise a trial off treatment - and a significant minority of people remain normal off treatment after this.

Side Effects: Very rarely 'fibrotic' or scarring reactions in lungs, abdomen or around the heart have been described in patients taking high doses of this class of drugs. If you are on long-term treatment we normally check blood tests once a year to screen for this sort of problem (although we have never actually seen it happen in any of our patients). If you develop any unusual breathing or stomach problems on treatment please let us know so that we can organise additional investigations to rule out this sort of side effect.

How to start Bromocriptine:

1. Take half a tablet (= 1.25mg) last thing at night as you go to bed with a snack (for example a glass of milk and a sandwich).

After 2 to 3 days like this if you feel well then ...

2. Take a whole tablet (= 2.5mg) last thing at night with a snack

After 2 to 3 days like this if you feel well then ...

3. Move the dose to one tablet (2.5mg) in the middle of your evening meal.

After 2 to 3 days like this if you feel well then ...

4. Take: Half a tablet (1.25mg) in the middle of breakfast, and, One tablet (2.5mg) in the middle of your evening meal.

After 2 to 3 days like this if you feel well then ...

5. Take: One tablet (2.5mg) in the middle of breakfast, and, One tablet (2.5mg) in the middle of your evening meal

We will usually see you in the clinic on this dose and check the level of prolactin in your blood.

If you do not feel well after any dose increase, then keep on the same dose for a few more days until you do feel alright. If you ever need to increase the dose in the future then do it in the same way – slowly by half a tablet every 2-3 days.

- Build up the dose slowly – so the body gets used to the drug
- Always take the tablets in the middle of something to eat – so that the drug does not suddenly rush into the blood stream from an empty stomach